

TOWN PLAN AS SOURCE OF EARLY HUNGARIAN TOWN PLANNING HISTORY

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(Received December 15, 1979)

Socio-economic development of Hungarian towns is about known but no reliable information is available on the shaping of their architecture and aspect, not even on layout level. The share of spontaneity and purposefulness in the evolution of our oldest towns is far from being known, a crucial problem both for being acquainted with our urbanistic traditions and for appreciating urban historical values.

What is more, scarce data are available on the process of the beginnings of urbanization. In general, research attempts to deduce the course of development from ulterior conditions. In this country, however, this is next to impossible, since frequent destructions annihilated the medieval substance of our towns to a degree that not even ground plans remained unaffected by the reconstructions that would be sources of knowledge on the late Middle Ages. Reconstruction of even the medieval town plan, town fabric is problematic, requiring to rely on results of research in history, history of architecture, archeology and linguistics, on what to found the main problem: detailed plan analysis, definition of the course of development, integration of the development picture into the town planning principles and practice of that age. Recent publications show an increased interest in town plans and their reconstruction but in lack of a reliable methodology, the research sometimes failed, as seen by contradicting pictures drawn from the ground plan development of one and the same town. Thus, also the appreciation of the results from the aspect of town planning history is rather arbitrary. From the aspect of deducing the development process and recognizing its spontaneous forces or intentions, interpretation of even an authentic reconstructed town plan is as difficult as to decipher an unknown hieroglyphic.

The problem is easier if the reconstruction can be paragoned to known plan types. Even analogies may be of help in reconstructing the plan where confrontation of identities and deviations with known material of history, history of architecture, archeology and linguistics offers a key to the development process. With no analogy, however, at most, details of the town plan can be confronted to corresponding details of other towns of known types,

as in the case of most of our earliest towns, where a relative chronology may be established by minutiously analysing the plan, comparing the details based on careful, accurate measurements, and observing their spatial interrelations, always comparing the results with those of the mentioned sciences referring to the age and to the function of the given detail. This is partly a check to the correctness of deductions, and a support in integrating the relative chronologic order into the real historical development, aligning thereby the evolution of the layout with the socio-economic development of the town and clearing causes and background of changes. Knowledge of layout components distinct in time and in space and their comparison with known examples from the same age lead to the appreciation of inherited urbanistic thinking, practice and culture.

Application of the outlined methodology principles will be illustrated on the town core of *Sopron* city, specially fitting to this methodology experiment because of its peculiar layout, of its history falling in one line of development of our medieval towns, of its authentically reconstructible medieval ground plan, and of the availability of ample historical, architectural, linguistic material from the late Middle Ages.

The town core of Sopron

Sopron is a western frontier town of Hungary towards Austria, at about 65 km from Vienna, with about 50 thousand inhabitants, with a wealth of architectural monuments. This fact, as well as the surrounding, wooded mountains and subalpine climate make it a nationally and internationally renown health resort with adequate infrastructure.

Sopron is one of the few Hungarian towns continuously developing since the Hungarian conquest, a continuity manifest in its building stock and in the richness of its archives.

Origins of the town go back to the Celtic age but on its actual site it has been founded by the *Romans*, quoted by *Pline the Elder* in A.D. 15 as *oppidum Scarabantia*, promoted to *municipium* in the early '70s. The Roman city is sited in an area of about 270 by 370 m, with the *Amber Road* as principal axis. The street network developed in a regular orthogonal system. Central area of this site had been surrounded by fortification walls early in the fourth century. Centre of the town, the *Capitolian* sanctuary stood at the SW corner of the actual town hall, the principal square of the medieval town (actually *Fő tér* = Main square) arose in a part of the forum comprising the pertaining two *insulae* (blocks of flats).

Early in the fifth century, the Roman town began to decline although minor constructions did occur. All buildings were destroyed in an incendiary

in the sixth century. By the time of Hungarian conquest (A.D. 896) the Roman town was long a heap of ruins, even city walls collapsed. At the Hungarian State foundation (A.D. 1000), Sopron became a royal bailiffship seat; half-timbered, burnt clay walls of the bailiff castle have been built beside the Roman city walls and followed their traces. By 1277, Sopron became a privileged royal town, the still visible town walls were erected, utilizing partly the Roman walls and partly the half-timbered walls of the bailiff's castle. Also bastions of the new town walls were erected in the place and form of the Roman ones. Archeological research in the recent decade has exactly settled development of the fortification systems.

With the precincts built up, there is little possibility to archeologically examine the street network, the system of plots, and the mode of built-up. Excavations could only be made in places of buildings destroyed in World War II to clear the street network of the Roman town. The medieval network of streets and plots is, however, quite different, their development could only be concluded on by means of the introductorily described complex method.

In the following, only the town core inside the walls will be considered, separated from the outskirts by the broad ring *Lenin körút (Várkerület) — Színház utca — Ógabona tér — Széchenyi tér*, including another wing of streets (*Szent György utca, Fegyverház utca, Templom utca*), with a lesser and a greater square as diagonal counter-poles (*Orsolya tér, Fő tér*). The outlined oval area is longitudinally divided into irregular blocks by a longer and a shorter street (*Új utca, Kolostor utca*). The street network is featured by the absence of crosswise streets excepted the *Fegyverház utca* in the south. However simple this system is, parallel rings of streets are uncommon either in Europe or in Hungary. Although the inserted places — dividing the inner ring of streets into two parts of similar length — smoothen exactly the turning points of the ellipse, the circulation here is at most ralented but continuous. Access through the town gates to this ring of streets will become an endless advancement and return. Even by-streets push to this path. In spite of its simplicity, this layout acts as a labyrinth and an enclosure, a feeling enhanced in Middle Ages by the threefold fortification walls. This is a typical medieval street network, irregular, simple but difficult to find one's way out.

The Roman city wall determining the town core shape is composed of arched and straight sections confining an area similar to an ellipse with peaks cut off, with a NE—SW longitudinal axis, somewhat arched sidewalls, straight short SW wall, a N wall joining rounded-off the W sidewall, thus, there are four corners. The enclosed area of 8.7 hectares is 404 m long by 250 m wide at its greatest dimensions. The two south corners are spaced apart at 145 m and the north ones at 190 m, though spanned by walls 200 m long. Irregularities of the configuration result in different angles such as 105°, 110°, 120° and 135° at the SE, NE, SW and NW corners, respectively.

Arched wall sections permit to complete the barrel shape into a full ellipse. Its foci are surprisingly at the intersections of the short walls and the greater axis. The full ellipse would have a greater axis $T = 475$ m and a shorter axis $t = 250$ m, foci are spaced at 201.9 m from the shorter axis hence at 404 m from each other.

This enclosure area is not too frequent, but also not uncommon in the late Roman age. The Roman fortification walls were elliptical in *Senlis* ($T = 320$ m, $t = 240$ m), in *Périgeux* ($T = 360$ m, $t = 260$ m), in *Bourges* ($T = 720$ m, $t = 290$ m), half of an ellipse in *Chalon-sur-Saône* (half greater axis 370 m, shorter axis 500 m). Romans were quite acquainted with the construction of ellipse as seen from their amphitheatrums e.g. that in Sopron. (It is interesting to see the elliptic walls of Périgeux to include the amphitheatrum ellipse.)

Minor irregularities of the arches of Sopron walls may be ascribed to be set out in a built-up area, although Romans, highly skilled surveyors, rather succeeded in approximating the ellipse in spite of the assumed hindrances.

Comparison of the described medieval street ring and the outlines of the Roman walls shows arched streets to have developed along arched walls and straight sections along the shorter, straight walls. In spite of the marked parallelism, details show deviations. Curiously *Templom utca* follows closer the Roman walls than does *Szent György utca*. The former but slightly deviates at the mouth of *Kolostor utca*, while the building front line is about twice as far from the Roman walls at the beginning of *Szent György utca* as near the Back gate.

Assuming the openings of Back and Fore gate to be certain, and the built-up near the Fore gate to correspond to the old town hall, then the most natural trace of traffic between the two medieval gates would about follow *Szent György utca*. The Fore gate being in the place of the Roman gate, and the Back gate being developed at the time of the Hungarian conquest, while the actual town hall is in the place of the bailiff's house in the 13th century (replacing, in turn, the Roman *Capitolium*) — validity of the assumption above seems to be historically supported. Just as loosely is the street stretch between the Back gate and the *Orsolya tér* related to the Roman walls, while *Fegyverház utca* is perfectly parallel to the short section of the fortification wall, it being in the trace of the Roman street network. Deviation of the town walls seems to point to the early development of *Szent György utca*, and so does its former name: *Felső utca* (Upper street), an important fact referring to the spatial and timely development of the street network in the town core.

Name and situation of *Új utca* (New street), neighbouring *Szent György utca*, are rather contradictory. Its name would suggest it to be the latest developed one, although it runs longitudinally in midtown, connecting *Orsolya tér* with the Main square and Fore gate.

The medieval salt market in *Orsolya tér* may be responsible for the settlement there of *Jews* by the end of the 13th century where also the Synagogue had been built about 1350. Jews had contributed a great deal to the urban development of Sopron, they lent money to the town for buying estates of the nobles and the early patricians in the outskirts, as financial, social bases of urban development. The position of Jews was rather peculiar, namely their houses made them members of the land community of Sopron, while personally they belonged under the jurisprudence of the King rather than under that of the Municipal Council. The name "New street", the accommodation of Jews of rather late settlement, the site of the Synagogue exactly at the halving point of the E side of the street date its arise by the end of the 13th and beginning of the 14th century.

This rather late development of *Új utca* is contradictory to its parallelism to the Roman city walls behind *Templom utca* — except a few houses at its ends — exceeding that of *Templom utca* itself.

It is most unlikely to set out at this high grade of parallelism after *Templom utca* has been built up — but it cannot be by chance. This contradiction can only be resolved by assuming the E side of *Templom utca* — towards *Új utca* — to be originally lined by a single row of long stripes of plots rather than by the actual double row of plots, just as actually on the side facing the opposite walls. Thus, then the trace of *Új utca* was only apparent by the line of the abutments. This assumption is supported by the total depth of the double row of plots between *Új utca* and *Templom utca*, about equal to the depth of the row of plots in *Templom utca* facing the city wall. With this hypothesis, the further development will be realized as that starting from a spare way usual at plot abutments, gradually becoming a street with building up the plot ends, and then parting them. This development process would resolve the contradiction: *Új utca* would follow an old trace but become a street later, in the 13th or 14th century.

Traces of *Új utca* and *Szent György utca* exactly determine the fusiform shape of the block included between them, that could thus only be built up after the adjacent blocks. Most of the block consists of a double plot row. It is not impossible that originally they were plots of the W side of *Szent György utca* quite up to the bypass in place of *Új utca*.

Late development of this area seems to be confirmed by the 14th century name of the plot adjacent to the Synagogue. This plot, accommodating the once town clerk, was mentioned as "*Marstall*" ("Mews") still in 1379, thus, it formerly accommodated horses. Anyhow, excavations in a small area of the plot 18, *Szent György utca*, at about 50 m from here, detected much straw and many horseshoes — hinting to horse keeping — at levels dated to the 11th to 13th centuries, the time of bailiff castle. Spatial and timely coincidence of the two data lets to conclude on that this island-like block could serve for

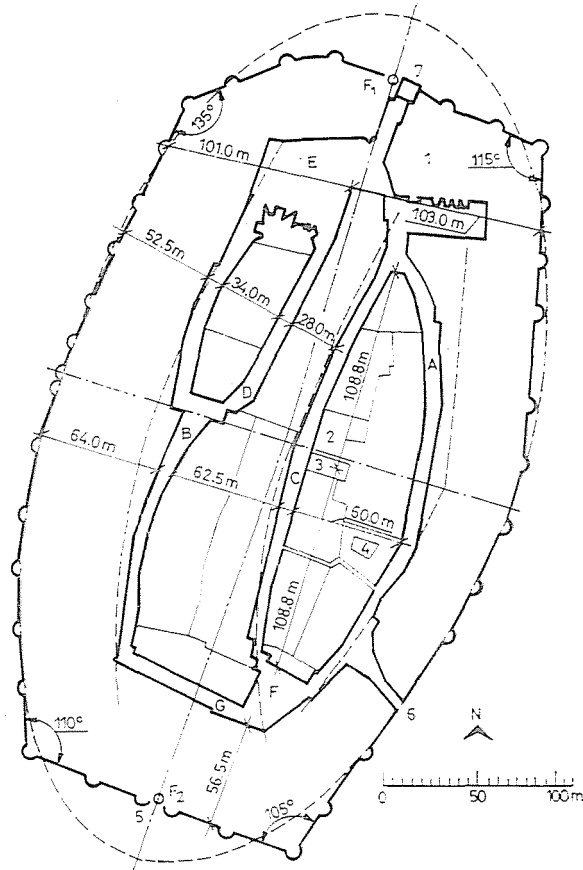


Fig. 1. Main structural characteristics of the plan of the medieval city of Sopron: 1. Block of the town-hall; 2. "Marshall"; 3. Synagogue; 4. site of excavations in Saint George street (Szent György utca); 5. place of the ancient Roman southern city gate; 6. Back gate; 7. Fore gate. A. Saint George street (Szent György utca); B. Church street (Templom utca); C. New street (Új utca); D. Cloister street (Kolostor utca); E. Main square (Fő tér); F. Ursula square — Salt market (Orsolya tér); F₁—F₂: Foci of ellipse drawn by completion of Roman city wall. Dash lines indicate streets running parallel to the Roman walls

horse keeping before the promotion to town in the 13th century. All these fit into the assumed development of *Új utca* where, besides, artificial upfill is the thickest as shown by geologic drillings. Thus, division of this area to plots is likely to have been made later.

Other difficult problems are those related to the block of the once *Franciscan* cloister and church. An interesting feature of the Sopron town core ground plan is that the double row of plots between *Templom utca* and *Új utca* becomes a single row near the block of the cloister, though with important jumps. The transition comprises a very narrow sawtooth line of little deep plots — plot morsels like chips from an earlier system. Mouth

of *Kolostor utca* across *Templom utca* caused no trouble in the plot system except a slight prominence of the front line. Also, the total width of the cloister block and the adjacent plots made the single row to equal the width of the double-row part as well as the plot depth between the west side of *Templom utca* and the Roman city wall. Also, *Új utca* is just here, along the short stretch beside the cloister, half the width of its other parts. This may be an indication that the cloister block was ulteriorly separated from the block between *Templom utca* and *Új utca*, seen also from the rectilinearity of the street after the inflection. As a conclusion, Franciscans might settle in a plotted rather than an empty area. Thus, the street might be opened by about 1277–78, the first mention of Franciscans in Sopron.

No doubt, however, this area was built up earlier, the first data on the house of the patrician *Harkai* family being from the time of King *Béla IV* and from 1284, it being likely to be the same as that mentioned in a land register from 1379 to join the cloister from the east. Division of the Franciscan block may be a concomitant to the division of all the plots, *Kolostor utca* being aligned with the intermediate plot border.

The settlement of Franciscans — indicating the change of the bailliff castle into a town — much transformed the town fabric. Opening of *Kolostor utca* may be ascribed to the Franciscan attempt to build a detached church. The history of architecture concludes from the lack of buttresses of the cloister building on the simultaneous construction of church and cloister. The grant of this area to the Franciscans is a problem of the advowson. The town — as we know — was not and could not be the advowee of Franciscans even later, since at the time of the foundation of the cloister, the town was legally still under development. Thus, the advowee granting the plot and funding the construction might be a private person or a group of such — maybe owning plots near the cloister. By the way, in the Roman era, the temple of *Sylvanus* stood near the actual Franciscan church.

Franciscans — just as other mendicant orders — used to settle in peripheries. In Sopron, however, cloister and church were built adjacent to the Main square as its major features. It is not unusual for Franciscan complexes to be near a square, for instance in *Bratislava* (ČSSR) at a square joining the main square, in *Košice* at the end of the fusiform main square, in *Szombathely* along a street leading to the main square, but never on the square itself.

This accommodation of the Franciscans in Sopron seems to be rather irregular else than by assuming the actual *Fő tér* not to have been the main square by that time, although the Roman *Forum* included this area. Separating, however, in our consciousness, the concepts of main square and of centre and considering topographically the situation of *Fő tér* with respect to the town core, it is obvious that a square directly joining the Fore gate separated from the city walls by a single row of plots is essentially in peripheral posi-

tion. The main square of a medieval town had important functions. But what a function was that of the square late in the 13th century in Sopron, having no town hall until 1420, and having its parish church outside the city walls, in the outskirts while marketing was in *Orsolya tér*? There is no main square without urban functions — the Franciscan church being a mere supplement to the parish church.

Construction of the Franciscan building complex acted, however, as a catalyst in developing the area into a main square. In fact, already the first town hall was beside the cloister, and each of its successors remained near the square, likely to be still developing at the time of Franciscan settlement, the farthest from *Orsolya tér*, in eccentric situation itself, then the marketing centre. It seems to have been unbuilt and thus, free from ruins, showing the place of the Roman square. This is why the bailiff's castle got in place of the Roman sanctuary. The two squares (*Orsolya tér* and *Fő tér*) were counterpoles both topographically and functionally near foci of the reconstructed ellipse. The Main square developed in a sense to ecclesiastic centre in this town missing any other ecclesiastic institution, thus it assumed the function of the Roman square, indispensable in a medieval town. Later the market was transferred here, since the 15th century, several data refer to merchants' booths between buttresses of the Franciscan church, typical of medieval markets. This peculiar situation of the church would have reacted on the building itself. Architecture historians observed the about equal length of nave and apsis, attributed to the still undeveloped layout system of monastic churches by that time. It seems, however, that also church siting constraints intervened. Orientation, connection to the cloister, the north wall as principal façade facing the square, plot length defined by two streets were factors determining church dimensions and proportions. The still undeveloped layout system facilitated fitting to the actual built-up conditions, to the town fabric just taking shape, resulting in a harmonic appearance. This harmonic fitting is reflected by the spire built in the early 1300 s, of a height of 43,5 m, equal to the square width, thus — as stated by Prof. *Frigyes Pogány* — to be contemplated at an angle of about 45°.

The Main square is at the NW junction of city walls cutting off outside connections, with no outlet. There are two continuous square walls joining at 110° while city walls include an angle of 135°. The church between *Templom* and *Kolostor* streets being oriented, the square is a trapezium broadening to the E, its EW length is 50 m, its shorter, W side is 39 m, and its wider E side between the apsis and the *Lackner* house is 48.5 m. The E boundary of the square is of special interest. The row of plots developed upon the assumed separation of the cloister block protrudes by about 26 m to the N from the north wall of the Franciscan church and terminates at about 25 m from the opposite *Storno* house. The NE end of the protruding part is exactly at

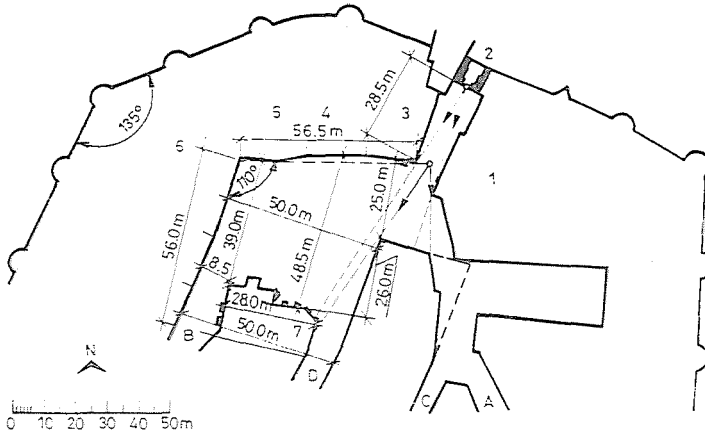


Fig. 2. Main square (Fő tér): 1. Town hall; 2. Fore gate; 3. Storno house; 4. Lackner house; 5. Fabricius house; 6. House of District Council; 7. Ancient church of Franciscan Order; A. Saint George Street (Szent György utca); B. Church street (Templom utca); C. New street (Új utca); D. Cloister street (Kolostor utca). Arrows mark points of sight

the mid-spacing between the Roman city walls. The west side of the row of houses is exactly parallel to the west side of the square causing the street to somewhat bend to the west. The row of plots in *Új utca* is still more curved, so that the elongations of both would join at the *Storno* house. The plot row is exactly opposite to the passage under the Fire Tower, 8.5 m wide and 28 m long, lined to the E by the once bailiff castle, the later town hall. Although the square is but partly confined by this row of houses, it does not act as unconfined because of the visual presence of the old town hall façade in the background.

By the time of the old town hall (replaced by the rectangular block of the new town hall by the turn of this century) the passage has led from under the Fire Tower to the last building of the protruding plot row hiding anything but part of the opposite façade. Further on, first the apsis of the Franciscan church was seen between the *Storno* house corner and the façade, but the slightly curved *Kolostor utca* offered no view. Proceeding toward the passage end, the church was ever completer seen, with no look at the other buildings in the square that were seen even later with a strong shortening. Now the principal façade of the church is fully visible and so is the W house row. Since, however, the spire appears only upon entering the square, this new, vertical feature grasps the eye.

This sophisticated design has not been arrived at by chance or from pure aesthetic aspects. The row of plots semi-closing from the E permits the access to the square but closes it from the noisy, busy region: *Szent György utca* connecting the Fore gate and the Back gate, hence it acts as baffle.

Let us analyze now the spatial relation between the narrowing, protruding row of plots, and the block of the old town hall. Narrowing has been obviously applied to avoid the collision of the plot of original width with the town hall block. Rather than cutting off the protrusion, the plots have been narrowed, thereby the two blocks overlap in a short section, leaving a gate 8.5 m wide for the traffic. Without this overlapping, the square would remain partly unclosed. The skew S corner of the old town hall may indicate a mutual accommodation. From the aspect of the square development sequence, this observation probabilizes the relatively late building up of the east closure of some protruding plots, as the likely completion of the process of development. The more so since the west front of *Új utca* is here not parallel to the castle wall behind *Templom utca*, but to the old town hall, pointing to the precedence of the town hall block, demolished at a great loss of historical and aesthetical values.

This peculiar layout of Main square may be related to defensive aspects. The passage from the Fire Tower may be considered as a trap where the invading enemy could be fired on from two sides and also from the opposite house, of a special importance before the construction of the bulwark in front of the gate. The final design of this square is a compromise between several aspects including that of providing adequate building area.

As concerns *Orsolya tér* diagonally opposite to the Main square, the inflection point of the rows of houses lining it from the south and the west is spaced at 57 m from the mouth of the passage leading from the Back gate just as is the inflection at 110° of the Main square from the mouth of the passage from the Fore gate. Even the inflection angle is similar: 120° . Here the angle of Roman walls was the least: 105° , as against the opposite 135° . Thus, angular junction of the square walls was forced upon by the city wall inflections, but the two similar angles and the identical corner distances hint to a common concept. The identity of corner to gate distances is by no chance but difficult to explain if not by assuming the later Main square to have imitated *Orsolya tér*, as shown by some other common features. They are similar by being backed by town walls hence no street interrupts the row of houses joining at an angle. Also *Orsolya tér*, although much smaller than Main square, is a trapezium 34 m high, 25 m of medium width, and the plot of the arcaded house facing the corner is about as long as the Franciscan church facing the Main square corner. A structural similarity is that between their connections to the street network.

Orsolya tér has developed as salt market under this name in the Middle Ages, probably rooting in the privilege granted by King Béla III to the Cistercian Abbey in *Heiligenkreuz* (Austria) to sell salt in Sopron. The 1233 regulation of the earlier income from selling the salt of the *Heiligenkreuz* Abbey mentions the Abbey house in the *castrum* of Sopron where the part

of the 3000 "zuans" of salt in excess of their needs was kept under the common seal of the Abbey and the *salinarii* of Sopron for the time conceded for sale.

Salt marketing in Sopron is unlike to have been based on the 3000 zuans of salt of the Abbey. Neither the Abbey privilege quotes limitation of the royal salt marketing — on the contrary, before 1233, the royal lessees are likely to have limited salt marketing by the Abbey.

In fact, the Abbey was not allowed to transfer the salt excess to Austria, then importing salt, but had to sell it in Sopron, at defined times. This points to a market involving more than the Abbey salt, the selling period from September 12 to December 6 is, however, most likely related to the winter slaughtering of animals. These point to the existence of a royal salt store in the town in the 12th and 13th centuries, and of a peculiar social layer, the royal *salinarii*, probably inhabiting the castle. The Sopron house of the Abbey is likely of having been some building of the *Ursulan* cloister in *Orsolya tér*, and also the royal salt store might be nearby. Situation of the salt market decided the settlement of butchers, and even that of the Jews in the S part of *Új utca*, near the Salt market. Excavations detected a Roman bath in the basement at the assumed salt store site.

But why was there the Salt market? In fact, *Orsolya tér* is sited between the Back gate and the Roman South gate recently found in the basement of the house No. 18. *Széchenyi tér*. The Back gate has been established during the construction of the Hungarian bailiff castle, with the abandonment of the Roman gate where previously the Amber Road entered the town, namely the Roman road stretch in the Sopron region was perfectly omitted because of the march-land.*

No doubt, however, the Roman gate building subsisted in the Middle Ages, namely a drawing from 1597 of the fortification system indicated a small double tower (stated earlier by LÁSZLÓ GERŐ to be a gate building) at a spot where later the foundations of the Roman gate have been discovered. Evidence of a medieval street leading from this gate to the town is, however, missing. It is not improbable that both south gates of the Sopron castle have been in use after the Hungarian conquest. Archeologists may be right in pretending that beside the medieval road leading to the Back gate, 1 or 2 km to the east from the once Amber Road, a short section may have subsisted in the Sopron area. For instance, the settlement of royal courtiers, annexed in 1269 to Sopron, lined this road. Thereby the gate could have a local function under the rule of the *Árpáds*, at least until the courtiers and maybe the *Lóvér* archers (1269 to 1277) were settled. No impact of the Roman South gate on the layout of the medieval town else but siting the Salt market is

* "Gyepü" = a wide, vacant defensive frontier zone.

apparent, the Amber Road stretch crossing the town perished with the Roman street network. In the Middle Ages there was no direct connection between the Roman South gate and the Fore gate but through the Salt market and *Új utca*.

The considerations above permit the conclusion that development of the layout system of the medieval Sopron had been determined by the Roman city walls to be a ring of streets parallel to them. Its most ancient part is the area between the Fore gate and *Orsolya tér*; the area around *Templom utca* is much more ordered, hence likely to be developed later, by mid-13th century. A still later development — seemingly by the last third of the 13th century — is the formation of *Új utca* from a trace, and of Main square, that might occur as late as early in the 14th century. The most ancient parts of the layout system are the Fore and Back gates and the old town hall block.

The medieval town plan still exhibits signs of the precedence of the bailiff castle. Establishments having to do with the bailiff castle are by no chance in the east part of the fortification (town) such as the house of the castellan, a small fort itself as judged from the old town hall block (in this case its protection afforded to leave unbuilt *Háromház tér*, considered as remnant of the Roman Forum), the area for accommodating the bailiff's houses (*Marstall*), the royal salt store at the S end of the castle between the two gates, and the salt store of the Abbey of *Heiligenkreuz*, certainly with other stores, an important duty of bailiff castles being the storage of goods.

Since the middle of the 13th century, the W side of the castle (town) is seen to be a residential area, where the ancestor of the *Harkai* family had had build a house, and soon afterwards the Franciscans settled. Thus, this

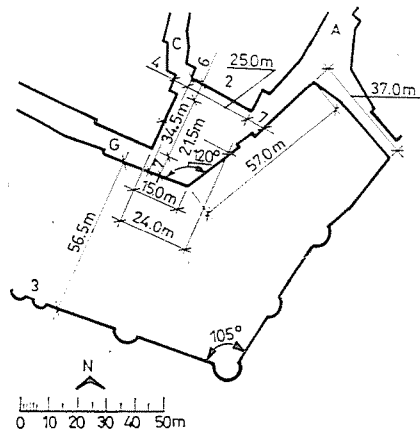


Fig. 3. Ursula square — Salt market (*Orsolya tér*); 1. Back gate; 2. "Arcaded house"; 3. Southern gate of the ancient Roman city; A. Saint George street (*Szent György utca*); B. New street (*Új utca*); C. Arsenal street (*Fegyverház utca*)

area is the core of the bourgeois town. About equal stripe plots lining *Templom utca* refer to a purposeful surveying. Another purposeful intervention is separation of the Franciscan cloister area from the plot stripes in the W side of *Templom utca*, and siting of the church, as well as the development of the peripheral area into a main square. The trace of *Új utca* — a rectilinear stretch of the Amber Road between the Roman gates — seems to delimit bailiff and bourgeois areas.

On the other hand, there is a functional difference between the northern and the southern parts of the castle area. The southern part seems to be rather of economical character with its stores and similar premises and the Salt market, while the northern part accommodated still in the 14th century the patricians (the *Dági*, *Kelénpatáki*, *Harkai*, *Gayzell* families, and offsprings of *István*, first judge of the privileged town) with ancestries of leading role by the time of the bailiff castle.

The essentially continuous development of the layout of Sopron may be considered as to be accelerated and made purposeful by the second half of the 13th century.

This conclusion is, however, sharply contradicted by the “cadastre” from 1379, a land community register reflecting a rather strict land division. A defined plot size is seen to have existed, ten unit plots made up a “string”, and the inner and the outer town consisted of ten strings each, thus, town parts were divided to 100 unit plots each.

By 1379 this system became obsolete, by about 1390 plot area units have been changed, ascribed to a change in the administration: the town had been divided to districts after the model of German town fabrics. Previously, however, the decimal system prevailed also in Sopron — just as in other Hungarian towns up to the 19th century — reducible to the organization system of the people of the bailiff (and of the early church lands). In fact, this must have been the previous organization system of the first citizens, including archers, courtiers, serfs of Sopron promoted to town in 1277. This system seems to be reflected in the plot system of 1379, related to a proportional distribution of community charges and benefits.

In 1317, *King Robert Charles* prescribes the proportional distribution of civilian rights and charges to offset the inner division of 1283. But also share in services and offices of the Sopron castle is bound to the castle “portion” according to the first resettlement order of 1283, and amount of the portion is determinant for the services and the utilization of urban amenities. The share in communal, moral and material benefits and charges depended on the share in the “town body” — borrowing the term from a document from 1330 — in the meaning of the previous term “portion”. The unit was the 1/100 part of the town body, incorporeal area unit of the plots.

This centesimal division not only corresponded to the municipal system

but also simplified the nominally equal division of communal charges and benefits, thus, validated the principle of equality of citizens.

As simple as some administration problems became in this decimal-centesimal system, it could be rather difficult to equally divide the irregular plot configurations confined by an about developed street network. If the centesimal division would really mean regularity, then the plot division and the development of the street network ought to be simultaneous, resulting in a regular, geometrical street network, simply divided blocks such as in the nearby towns *Győr* and *Wienerneustadt*. Division of founded towns into rectangular plots has possibly been preferred not only because of the simplicity of surveying but also of the possibility of exacter — and more righteous — determination of concomitant charges and rights. The development of the plan of Sopron in compliance with prevailing and gradually developing features, rather than according to a geometrical configuration, clearly shows the relative lateness of the at least numerically “regular” plot division. This would not mean the absence of plots in the bailiff castle but only to be lesser in number and in size, in order to meet other area needs, but presumably organized by tens. Thus, the centesimal division after transfer of the bailiff castle is a recent disposition, meaning, if not a systematic layout, but absolutely a conception, formally originating from the bailiff castle organization but in strict connection of purport and approach to the urban concept, having the frames of constructional law settled in the privilege document of 1277. It is unlikely that at the time of centesimal division, there were in fact as many plot claimants. It is rather a quota than the number of town-dweller or to-be town-dweller families that might be less direct after 1277, so that even the kings reprimanded — with little success — those who left their urban houses to settle in the outskirts, considering themselves entitled to communal benefits though exempt from charges or services by their houses built on charge-free plots. *Nota bene*, by that time the new town was not sharply detached — either socially or organizationally — from the decomposing castle organization and the developing nobiliary county. Thereby the already deficient bearing of burdens further decreased, and the royal expectation of better financial and military performance of the town shedding the decomposing bailiffship frames was doomed to failure.

But in fact, had the “town body” consistently been divided? The plan being continuously developed, consistent enforcement of the new plot system would require perfect liquidation of the actual conditions. On the contrary, in 1339 a lawsuit was going on concerning a donjon possessed in 1256 by the traitor castellan Peter decapitated in 1278; its plot size is unlikely to have been complied with the centesimal plot area. Division into unit plots could not be consistent since even regular shaped rows of plots developed within confines of fortification walls and gates would not give integer unit plots. Although

little is known of donjons in Sopron in the 13th century, documents reveal pertaining "*curiae*" and houses. Thus, they had big plots and also the ordinary living houses were likely to have had courtyards. Certainly, in 1379 the block of the old town hall did not include a house of $3/4$ units because the city wall behind prevented formation of an entire plot but since the entire block counted as $3 \frac{1}{4}$ plots, thus, the block existed before the development of the unit plot system.

The relatively high number of integer plots in 1379 suggests the enforcement of the system in a great part of the town, even if not at once. The area unit having been determined, the division could be successive. Again referring to the internal crisis of 1283 to 1330, these fifty years of revolution aiming at developing two, rather than one, cities offered ample possibility of rearrangement. Namely, the by-laws authorized the city to sell the downtown "houses" of those who did not return, at any cheap prize, an opportunity to redivide, reshape the plot. Remind also that the urban two-storey house type with the longitudinal side occupying the full plot width was not yet generalized in Sopron in the 13th century, where the houses little differed from the rural ones either by size or by material. Also timber houses are known to have been often transferred in this period, permitting plot redivision in built-up blocks.

Last but not least, after the bailiff castle was transferred to the citizens, first of all, castle establishments of economical function (stores, stables) might be demolished or transformed, or even unbuilt areas might occur. Thus, there might be ample building grounds within the existing street network but the number hundred had to be reached by crosswise dividing the actual plots. Up to 1379, the plot stock changed also by purchase or inheritance, without assuming an initially perfect equality of plots. In 1379, there was no plot less than one quarter that may indicate that areas between an integer and a half plot were considered at an accuracy of $1/4$ plot.

As a conclusion the cadastre of 1379 is likely to indicate the most of integer plots in "strings" built up later according to our layout analysis, or where the former bailiffship conditions had been eradicated. Distribution of the 1379 plots according to "strings" and sizes:

Number of									
Strings	Integer plots		Fractional plots						total
	1 unit	2 units	$2\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	
String I.	2	2	—	1	—	1	4	—	$10\frac{1}{4}$
String II.	5	—	—	3	—	—	1	—	10
String III.	6	—	—	—	—	—	7	—	$9\frac{1}{2}$
String IV.	5	—	—	2	—	—	4	—	10
String V.	6	—	—	1	—	—	3	—	9
String VI.	7	—	—	2	—	—	—	—	10
String VII.	7	—	—	1	—	—	3	—	10
String VIII.	4	—	1	1	—	—	4	—	10
String IX.	7	1	—	—	—	—	2	—	10
String X.	1	1	—	—	1	—	2	1	$5\frac{1}{2}$
Total:	50	4	1	11	1	1	30	1	$94\frac{1}{4}$

Ten houses sharing about six integer plots as an average, primarily strings VI, VII, IX include more than average integer plots and the less of fractional plots (string VI containing no, and string IX two half plots, the others being integer ones). Strings VI and VII might have been in the inner, W side of *Szent György utca*, and in *Új utca*, while string IX may be identified with the row of plots in the E side of *Templom utca* between *Fegyverház utca* and *Kolostor utca*. Since, however, only nine "houses" have been registered in string V sited in the N and W side of Main square, the ratio of six integer to few fractional plots here ranges string V with the former ones. Thus, conclusions drawn from the plot sizes are the same as those drawn from layout analyses still confirmed by the least regular plot division in string I, part of the old town hall block and of the E side of *Szent György utca*, the area likely to be the first to develop. Also the incomplete string X, E neighbour of the Cloister block, has a rather irregular plot division, a string much affected by the street opening, on the other hand, the Franciscan church and cloister appeared not to belong to the land community.

East-European colonization towns developed in the 13th and 14th centuries testify the preference for circular or oval town shapes and for rectangular or square market places. Division of the town area to streets and plots between market place and walls was made by adjusting them either to the arched town walls or to the rectangular market place.*

The first case is that of planning "from outside inwards", characterized by curved or broken-line streets mostly parallel to the city walls, cutting out plots of about equal depth towards the walls, purposefully leading the access roads towards the market place, resulting, in final account, in rectangular

* HOENIG: *Deutscher Städtebau in Böhmen*. Berlin, 1921.

blocks of plots between circular walls and ring streets, with about straight boundaries and orthogonal corners.

Sopron, with its ring of streets developed along the oval Roman walls and rectangular main square is affine to towns planned from outside inwards, main roads leading through the gates to the market place are, however, absent. Sopron is not a founded city but representant of a typical trend of Hungarian medieval town development, evolved from a bailiff castle to a city in the second half of the 13th century. The Main square, with unusual site and function, exhibits features of the period. The oval town outline inherited from the Romans became up-to-date again so it was kept in constructing the new fortifications. The layout development of Sopron increasingly applied town-planning achievements of the period, though limited by inheritance from the previous period. The Main square itself exhibits the effect of the local model.

No knowledge is available of the composition of the first generation of the developing citizenry, neither of the way how urbanistic ideas of the period have got to Sopron. It seems to exist a group of citizens in Sopron by the 1250s that recognized the crisis of the bailiff castle organization and expected solution from the urbanization. In fact, the charter of 1277 is a recapitulation of earlier partial liberties. Conception of "town body" is likely to have ripened together with the gradually developing legal urban conception, related by the plot system. The group members of the highest erudition in this respect were presumably *Fülöp Harkai* († before 1270) and his son *István* († 1330), both bearing the title of *magister* indicating high education, often having visited the royal courts in Austria and Bohemia in diplomatic missions for the king. Their erudition and relations attest an at least indirect part in solving the town planning problems of Sopron on the way to urbanization.

Summary

Methodology principles suiting reconstruction of the early development of town plans will be illustrated on Sopron, a town arisen in the Middle Ages on Roman foundations, with rich archives preserved, and rich monumental and archeological findings.

The study covers the problems of how the medieval town plan was affected by being in the site of a Roman town abandoned during the peoples' migration but not destroyed. What are the imprints of the bailiff castle age? What are the plan features issuing from the urbanization in the 13th century? Answers are sought by minutious comparative analyses of town walls, street traces, squares, and conclusions are compared with archeological findings and town history documents. Chronologically ordered observations permit to establish the course of development in space and time. The medieval street network — as against the Roman one — followed the Roman town walls, while the development of squares depended on socio-economic factors. Development of the plan according to needs of the citizenry was complete by the turn of the 14th century, where European town planning principles of the period had been consciously applied on the Main square. Curiously, the Main square of Sopron is on the site of the Roman Forum, but with a different shape and function, although it has developed in the latest stage of the layout system (the farthest from the Roman age).

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